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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,869	12/19/2001	Rene Jean Zimmer	DN2001205	3717

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EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Advisory Action Before the Filing of an Appeal Brief	Application No. 10/024,869	Applicant(s) ZIMMER ET AL.	
	Examiner Steven D. Maki	Art Unit 1733	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 31 March 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: _____.
- Claim(s) objected to: _____.
- Claim(s) rejected: _____.
- Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see advisory action attachment.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☒ Other: Interview Summary, 4-19-06.

Advisory Action Attachment

Allowable Subject Matter

Claims 1-18 would be allowable if (1) claims 1, 16 and 17 are amended to include the subject matter of figure 3 (e.g. claim 1 line 8 is amended by inserting --having a convex surface extending from and-- after "the second side (2)'), (2) dependent claim 7 is appropriately amended in view of the amendment to claim 1 and (3) literal antecedent basis is provided by inserting --convex-- before "sides 32 and 32'" at line 3 of paragraph 37 on page 6 of the specification.

Support for the proposed changes may be found in original figure 3 and paragraph 26 on page 4 of the specification. Although disclosing concave sides (figure 4 of Drows 302) or straight sides (figure 4b of Lobert et al), the applied prior art fails to suggest "the second side (2')) having a convex surface extending from and forming with the outer surface (S1) an undercut extending beneath the apex (P)" (emphasis added) in combination with the remaining limitations of claim 1.

Background

Drows 302 discloses providing a TIRE SIDEWALL with **undercut projections** (undercut wave shaped flutes 9) having a microscopic size to minimize friction and drag forces caused by the movement of the tire through the air. Fronek et al motivates one of ordinary skill in the art to provide Drows 302's microscopic undercut projections with the claimed microscopic height of 0.2 to 100 micrometers since Fronek et al suggests using a microscopic height of 10 to 250 micrometers for projections, which like those of Drows 302, function to reduce drag. *Applicant fails to argue that it would have been*

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unobvious to provide Drews 302's projections with a height of 0.2-100 micrometers for the purpose of reducing drag.

Ohsawa discloses providing a TIRE TREAD with smaller grooves defining projections to reduce resistance to water flow wherein the **projections** have a height of 10-500 micrometers such as 50 micrometers (a microscopic size). The applied secondary art (at least one of Lobert et al, Drews 302 and Drews 290) provides ample suggestion to provide Ohsawa's projections with the claimed undercut since the secondary art suggests providing projections for reducing resistance to fluid flow with an undercut. In figures 4a, 4b, Lobert et al shows undercut projections being an alternative to projections which are not undercut. *Applicant fails to argue that it would have been unobvious to provide Ohsawa's projections with an undercut as an alternative shape for the purpose of reducing resistance to fluid flow and thereby improve resistance to hydroplaning.*

The original disclosure describes improving dirt repellence, self cleaning effect, water repellence and color shade special effects. The original disclosure teaches that dirt repellence is obtained because "... the size of the dirt particles is relatively larger than the dimension of the micro-grooves thus formed" (paragraph 15 on page 3 of specification). Drews 302 teaches "micro-grooves" (depression / troughs 16) since Drews 302 teaches alternating depressions / troughs 16 with projections (flutes 9) having a microscopic size. Ohsawa teaches "micro-grooves" (smaller grooves) since Ohsawa teaches using a depth of 10-500 micrometers such as 50 micrometers (example 1 / paragraph 258) for the smaller grooves (and a corresponding height of 10-

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500 micrometers such as 50 micrometers for the projections). The size of 50 micrometers falls within the range "0.2 to 100 micrometers" described in claim 1. Hence, *the original disclosure, Drews 302 and Ohsawa each teach the structure of a three dimensional pattern comprising microscopic projections and micro-grooves.*

Applicant argues "... the references do not address the same problems as those addressed by the instant invention and it would not, therefore, be obvious for one skilled in the art to look to the cited art for a solution." (page 5 of response 3-31-06). Applicant has cited no authority holding that non-obviousness must be established if the prior art fails to identify the problems described in the specification. Moreover, applicant's argument is inconsistent with MPEP 2144, which states: "The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant."

Applicant identifies the following properties of the claimed invention: "... enhanced self-cleaning; improved optical appearance; improved water repellence that reduces the risk of aquaplaning; and allow for color differentiation" (page 5 of response filed 3-31-06). With respect to the properties of self-cleaning, water repellence and optical effects and applicant's reliance on those properties to establish nonobviousness, "... the statement that a *prima facie* obviousness rejection is not supported if no reference shows or suggests the newly-discovered properties and results of a claimed structure is not the law." *In re Dillon*, 16 USPQ 1897, 1901 (Fed. Cir. 1990), *cert. denied*, 500 U.S. 904 (1991) (affirmance of obviousness rejection wherein claimed

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invention addressed problem of reducing solid particles during combustion of fuel whereas applied prior art addressed problem of dewatering fuel).

The claimed invention has not been compared with either Drews 302 or Ohsawa. The original specification contains description comparing the disclosed invention with a tire having a smooth surface, but does not contain description comparing the disclosed invention with the minutely crenate pattern of either Drews 302 or Ohsawa. Although the original disclosure mentions reducing air resistance (paragraph 7 of specification), the specification contains no experimental data factually supporting the conclusion that the claimed invention unexpectedly reduces air resistance compared with the reduction in air resistance obtained by Drews 302. Although the original disclosure describes reducing the risk of aquaplaning (paragraph 16 of specification), the specification contains no experimental data factually supporting the conclusion that the claimed invention unexpectedly reduces the risk of aquaplaning compared with the reduction in the risk of aquaplaning obtained by Ohsawa; it being noted that Ohsawa's Example 1 tire had excellent hydroplaning resistance (index 105, paragraphs 258, 264) compared to the hydroplaning resistance (index 100) for the comparative tire having smooth side faces and bottom face of the circumferential and transverse grooves. With respect to dirt repellence and optical properties, the specification does not describe improving those properties when using only two projections (claim 1 reads on at least two projections) and does not compare the claimed invention with the improvement in dirt repellence and water repellence achieved by the microscopic projections and microscopic grooves of either Drews 302 or Ohsawa.

Applicant states: "The Examiner has not shown how a result that includes simultaneous achievement of reduced, hydroplaning, optical and color differentiation, and a reduced dirt in collection channels would not be unexpected when none of the cited art achieves such a result." (page 15 of response filed 3-31-06). First: Applicant has the burden to show unexpected results and applicant has failed to meet that burden. See MPEP 716.02(b). Second: Objective evidence which must be factually supported by an appropriate affidavit or declaration to be probative value includes evidence of unexpected results. See MPEP 716.01(c).

Applicant argues: "The Examiner mis-characterizes the achievement of unexpected results of the invention as attorney argument." (page 15 of response filed 3-31-06). No unexpected results over the applied prior art has been shown. Experimental data has not been presented comparing the claimed invention to Drews 302 or Ohsawa so as to factually support applicant's unexpected results argument that the present invention simultaneously achieves reduced hydroplaning, optical and color differentiation and reduced dirt in collection channels whereas none of the cited art simultaneously achieves reduced hydroplaning, optical and color differentiation and reduced dirt in collection channels.

Applicant argues "The differences noted by Applicant's attorney are not 'argument' but factual evidence in the cited reference documents." (page 18 lines 7-9). MPEP 716.01(c) states "The arguments of counsel cannot take the place of evidence in the record." For example, the following portions of the after final response filed 3-31-06 contain arguments are not supported by evidence in the record: (1) page 6 lines 20-23,

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(2) page 7 lines 17-20, (3) page 8 lines 31-32, (4) page 9 lines 1-2, (5) page 10 lines 8-9, (6) page 11 lines 13-14, (7) page 14 lines 11-12 and (8) page 15 lines 6-8.

Drews 302

Applicant argues that "size" and "microscopic" in Drews 302 is vague, ambiguous, non-specific, and unclear. There is no ambiguity in the actual language used by Drews 302 at col. 8 lines 28-38. One of ordinary skill in the art would have no difficulty interpreting Drews 302's disclosure at col. 8 lines 28-38 when read in light of Drews 302's entire disclosure including the figures and specification.

Applicant argues and the examiner agrees that the language of "microscopic" must be taken in the context of Drews 302's purpose to reduce drag. Drews 302 uses the microscopic projections on the tire to reduce drag and Fronek et al instructs one of ordinary skill in the art to use a height of about 10-250 micrometers for microscopic projections that reduce drag.

Applicant states: "In order to be effective in meeting all three of the objectives [dirt-repellence, water-repellence, self-cleaning], the invention structure needs to be smaller than the size of the dirt particles. See para. 7-9 and 15 of the specification." (page 7 of response filed 3-31-06). Examiner agrees that claim 1 recites "projections" having the microscopic size of "0.2 to 100 micrometers" whereas paragraph 15 describes "micro-grooves". Examiner also agrees paragraphs 7-9 and 15 mention "micro-grooves" being smaller than the size of the dirt particles. The examiner adds that Drews 302 teaches "micro-grooves" between projections having a microscopic size

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and that Ohsawa teaches "micro-grooves" having a microscopic size of for example 50 micrometers.

Applicant argues that the examiner overlooks limitations in the claims regarding "originate", "radially outer surface" and "any plane tangent". See last paragraph on page 7 and first paragraph on page 8 of after final filed 3-31-06. In response, the examiner provides the following comments:

First: Applicant refers to an attached reproduction of figure 4 from Drews 302. No reproduction of figure 4 of Drews 302 has been received.

Second: Each microscopic projection of Drews 302 comprises a first concave side and a second concave side intersecting at an apex wherein the first side is longer than the second side. The second side forms an undercut because it is concave. The shape of Drews 302's projections (wave shaped flutes) is best seen in figure 4.

Third: In view of applicant's definition of "radially outer surface Si" at the last three lines of paragraph 12 on page 2 of the specification, the "radially outer surface Si" of Drews 302's tire, like the "radially outer surface S1" in applicant's figure 1, is the surface intersecting the lowest points between the second sides and the first sides of the microscopic projections. Since Drews 302's microscopic projection is wave shaped, any plane tangent to the first side must intersect the "radially outer surface Si" of Drews 302's tire sidewall at an acute angle.

Fourth: Applicant states: "Should the Examiner consider the series of points P as defining a surface, a position that is considered untenable by Applicant's, tangent line T1 would lie within that surface and not intersect such a surface at all...". This argument

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is not understood. A tangent to the plane passing through the lowest points between the first and second sides is a tangent to the "radially outer surface" instead of the "first side". Furthermore, it is not seen how claim 1 must be read as narrow as set forth on pages 7 and 8 of in the after final amendment filed 3-31-06. Is applicant arguing that claim 1 excludes rounding as described in paragraph 13 of the specification? Is applicant arguing that that the projections of claim 1 cannot read on projections such as those shown in figure 7 and 9, which are completely surrounded by other projections?

Fifth: Applicant's argument that Drews 302 teaches a concave flute side in which at least a portion of the second side to its origin does not form an undercut extending beneath the apex (P) is not commensurate in scope with the claims since none of the claims require the entire side to form an undercut with the radially outer surface so as to exclude the peak from being located above the first side of an adjacent projection.

Applicant argues that Fronek et al lacks projections that meet the limitations of the claims as to being undercut and within a specific height range. More properly, Fronek et al teaches using a height of 10 to 250 micrometers for projections adapted to reduce drag and thereby suggests using the claimed microscopic size of 0.2 to 100 micrometers for Drews 302's microscopic projections for reducing drag.

With respect to applicant's arguments regarding the MOLD and PROCESS OF USING THE MOLD, projections on tires have been made using molds having surfaces corresponding to the shape of the projections. Motivated by the desire found in Drews 302 to make a tire having microscopic undercut projections, one of ordinary skill in the art would have found it obvious in light of Ohsawa's disclosure to use a mold having

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surfaces corresponding to the microscopic projections to make Drews 302's tire. In the examiner's opinion, the 103 rejection of claims 16 and 18 stands or falls with the rejection of claim 1.

With respect to applicant's arguments regarding PROCESS OF MAKING TIRE USING TAPE, Drews 302 suggests adhering a tape (cover member) having the projections using adhesive to a tire and Japan 219 or Baker suggests using a vulcanized tire when adhering a tape to a tire.

Ohsawa

Applicant argues "The enhanced water and dispersement achieved by the present invention is not achieved by Ohsawa." (page 10 of response filed 3-31-06). "The arguments of counsel cannot take the place of evidence in the record." See MPEP 716.01(c). Applicant has presented no evidence as to why the example 1 tire of Ohsawa does not achieve "enhanced water and dispersement". Ohsawa example 1 tire has projections on the radially outer surface (sidewalls and bottom) of a groove wherein 100% (falling within the claimed range of more than 75%) of the first sides of the projections intersects the radially outer surface at an acute angle. The height of these projections, which is equal to the depth of the smaller grooves 22, is 50 micrometers (falling within the claimed range of 0.2 to 100 micrometers). The angle alpha for these projections is 53.2 degrees (falling within the claimed range of 5 to 60 degrees). See pages 3 and 4 of the advisory action dated 5-18-04. Ohsawa's example tire 1 achieves more excellent anti-hydroplaning performance (index 105) than that of the comparative example 1 tire. Since Ohsawa's example 1 tire comprises projections having a height of

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50 micrometers within the claimed range of 0.2 to 100 micrometers, an angle alpha of 53.2 degrees within the claimed range of 5 to 60 degrees, and an excellent anti-hydroplaning resistance (index 105), it is not seen how the claimed tire has "improved water repellence that reduces the risk of hydroplaning" unexpectedly superior to that of Ohsawa.

The only reason why Ohsawa does not anticipate claim 1 is that Ohsawa is silent as to the projection being undercut such that the first side is longer than the second side. As noted on page 7 of the last office action, however, Ohsawa teaches that other shapes may be used for the smaller grooves defining the projections "if they have the effect to reduce the resistance to water flow" (paragraph 164). As evidenced by the secondary art (e.g. Lobert et al), an undercut shape may be alternatively used for microscopic projections that reduce resistance to fluid flow. Compare figure 4b with figure 4a. Motivated by the desire found in Ohsawa to reduce resistance to water flow to reduce the risk of hydroplaning, one of ordinary skill in the art would have found it obvious to use the undercut shape for Ohsawa's microscopic projections in light of the suggestion from at least one of Lobert et al, Drefs 302 and Drefs 290 to form projections for reducing resistance to fluid flow such that the projections are undercut.

With respect to applicant's arguments regarding the dependent claims, see last office action dated 12-30-05.

conclusion

The motivation / suggestion to combine may address the problem of reducing resistance to air flow or the problem of improving hydroplaning resistance by reducing

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resistance to water flow. There is no requirement for the applied prior art to address problems of dirt repellence, water repellence that reduces risk of hydroplaning, and optical appearance.

The problems of dirt repellence, water repellence that reduces risk of hydroplaning, and optical appearance have been considered. However, it is not known how much dirt repellence, water repellence and optical appearance the claimed invention achieves. It is not known if the claimed invention has better dirt repellence, water repellence and optical appearance than either Drews 302 or Ohsawa. It is not known if the shape of an undercut (in contrast to the microscopic size of the micro-groove discussed at paragraph 15) achieves improved dirt repellence, water repellence and optical appearance.

The closest prior art is either Drews 302 (tire sidewall + undercut projection + microscopic size) or Ohsawa (tire tread + projection + microscopic height). The claimed invention (tire sidewall or tire tread + undercut projection + microscopic height of 0.2 to 100 micrometers) has not been compared to either Drews 302 or Ohsawa. There is no experimental data in the original specification and/or a 132 declaration factually supporting applicant's unexpected results argument that the present invention simultaneously achieves reduced hydroplaning, optical and color differentiation and reduced dirt in collection channels whereas none of the cited art simultaneously achieves reduced hydroplaning, optical and color differentiation and reduced dirt in collection channels.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
April 25, 2006


STEVEN D. MAKI
PRIMARY EXAMINER
4-25-06